



11<sup>th</sup> January 2016

TO: ALL MANUFACTURERS

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## SPRING EFFECT AND DYNAMIC PROPERTIES

I am writing further to our Notice dated 8 May 2015, proposing an update to the interpretation of Appendix II, 4c of the Rules of Golf, which states that:

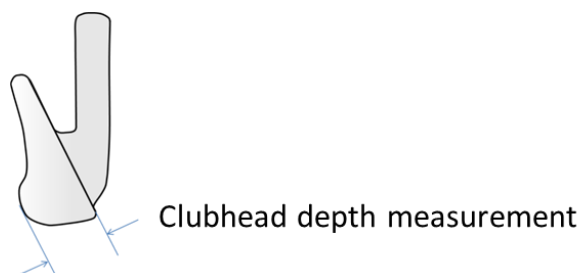
*The design, material and/or construction of, or any treatment to, the clubhead (which includes the club face) must not:*

- (i) have the effect of a spring which exceeds the limit set forth in the Pendulum Test Protocol on file with the R&A; or*
- (ii) incorporate features or technology including, but not limited to, separate springs or spring features, that have the intent of, or the effect of, unduly influencing the clubhead's spring effect; or*
- (iii) unduly influence the movement of the ball.*

Thank you to those manufacturers who took the time to comment on this proposal and, after careful consideration of all of the responses received, I would confirm that the decision has been taken to adopt the revised interpretation with effect from 1 March 2016.

The details of the updated interpretation are:

1. Clubs with lofts greater than 35 degrees will be deemed to meet the requirements of Appendix II, 4c and will not be tested.
2. Clubs (except putters) with claimed, marked or measured lofts of 35 degrees or less, a clubhead depth that is less than or equal to 1.5-in. **and** a radius of curvature of the club face that is greater than 30 inches will be screened over the entire impact area using the Pendulum tester. In the event that a CT value above 239 microseconds (plus an 18 microsecond tolerance) is found, such clubs will continue be tested using the cannon test at an appropriate speed, usually 133 ft/s. Clubs which measure more than 0.008 above a baseline plate will be ruled non-conforming.



3. All other clubs not covered within points 1 and 2 above (except putters), will be evaluated for spring effect solely using the Pendulum Test<sup>[1]</sup>. Clubs which have a maximum characteristic time (CT) within the impact area<sup>[2]</sup>, in excess of 239 microseconds (plus an 18 microsecond tolerance) will be ruled non-conforming. Clubs which have a maximum characteristic time outside the impact area for a club in excess of 257 microseconds (plus an 18 microsecond tolerance) will be ruled non-conforming.

This revised interpretation will help to further ensure that the conformance evaluation criteria for spring effect are transparent, understandable and reproducible. It will also help to further ensure that manufacturers receive conformance decisions in a timely manner. Existing decisions will not be revisited based on the proposed evaluation.

We are currently working on protocols to confirm the specific details of our measurement methods and these will be circulated in due course. In the meantime, I am attaching a flowchart illustrating the route applicable clubheads will take during evaluation for 'spring effect', which we hope is of assistance.

If you have any questions, please do not hesitate to let me know.

Yours faithfully



**Dr Steve Otto**  
Director – Research and Testing

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<sup>[1]</sup> All tests will be performed using the modified Pendulum device, which de-lofts the club face.

<sup>[2]</sup> The impact area for drivers, fairway woods and hybrids is defined as the central strip down the middle of the club face having a width of 1.68 inches (42.67 mm). For the purpose of this measurement, the portions of the impact area within 0.25 inches (6.35 mm) of the sole and crown are excluded.